## Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims**

1. **(Previously Presented)** A clustered multi-antigenic construct having the structure:

wherein q is 0 or 1;

each occurrence of s is independently an integer from 1-20;

t' is an integer from 2-6;

R<sup>X1</sup> is hydrogen, alkyl, acyl, aryl, heteroaryl, -alkyl(aryl), -alkyl(heteroaryl), a nitrogen protecting group, an amino acid or a protected amino acid;

R is hydrogen or an immunogenic carrier;

each occurrence of the spacer is independently a substituted or unsubstituted aliphatic, heteroaliphatic, aryl, heteroaryl or peptidic moiety;

the linker is either a free carboxylic acid, –O-, (carboxamido)alkyl carboxamide, MBS, primary carboxamide, mono- or dialkyl carboxamide, mono- or diarylcarboxamide, linear or branched chain (carboxy)alkyl carboxamide, linear or branched chain (alkoxycarbonyl)alkyl-carboxamide, linear or branched chain (carboxy)arylalkylcarboxamide, linear or branched chain (alkoxycarbonyl)alkylcarboxamide, an oligoester fragment comprising from 2 to about 20 hydroxy acyl residues, a peptidic fragment comprising from 2 to about 20 amino acyl residues, or a linear or branched chain alkyl or aryl carboxylic ester;

each occurrence of L<sup>1</sup> is independently a substituted or unsubstituted aliphatic or heteroaliphatic moiety;

each occurrence of A is independently a carbohydrate determinant having the structure:

$$R_0 = \left\{ \begin{array}{c} R_8 \\ R_7 \end{array} \right\}_{x} = \left\{ \begin{array}{c} R_5 \\ R_4 \end{array} \right\}_{x} = \left\{ \begin{array}{c} R_5 \\ R_4 \end{array} \right\}_{x} = \left\{ \begin{array}{c} R_2 \\ R_4 \end{array} \right\}_{x} = \left\{ \begin{array}{c} R_4 \\ R_4 \end{array} \right\}_{x} = \left\{ \begin{array}{c}$$

wherein a, b, c, d, e, f, g, h, i, x, y and z are independently 0, 1, 2 or 3, with the proviso that the x, y and z bracketed structures represent pyranose moieties and the sum of b and c is 2, the sum of d and f is 2, and the sum of g and i is 2, and with the proviso that x, y and z are not simultaneously 0; wherein R<sub>0</sub> is hydrogen, a linear or branched chain alkyl, acyl, arylalkyl or aryl group; wherein each occurrence of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub> and R<sub>9</sub> is independently hydrogen, OH, OR<sup>i</sup>, NHR<sup>i</sup>, NHCOR<sup>i</sup>, F, CH<sub>2</sub>OH, CH<sub>2</sub>OR<sup>i</sup>, a substituted or unsubstituted linear or branched chain alkyl, (mono-, di- or tri)hydroxyalkyl, (mono-, di- or tri)acyloxyalkyl, arylalkyl or aryl group; wherein each occurrence of R<sup>i</sup> is independently hydrogen, CHO, COOR<sup>ii</sup>, or a substituted or unsubstituted linear or branched chain alkyl, acyl, arylalkyl or aryl group or a saccharide moiety having the structure:

wherein Y and Z are independently NH or O; wherein k, l, r, s, t, u, v and w are each independently 0, 1 or 2; with the proviso that the v and w bracketed structures represent pyranose moieties and the sum of l and k is 2, and the sum of s and u is 2, and with the proviso that v and w are not simultaneously 0; wherein  $R'_0$  is hydrogen, a linear or branched chain alkyl, acyl, arylalkyl or aryl group; wherein each occurrence of  $R_{10}$ ,

R<sub>11</sub>, R<sub>12</sub>, R<sub>13</sub>, R<sub>14</sub> and R<sub>15</sub> is independently hydrogen, OH, OR<sup>iii</sup>, NHR<sup>iii</sup>, NHCOR<sup>iii</sup>, F, CH<sub>2</sub>OH, CH<sub>2</sub>OR<sup>iii</sup>, or a substituted or unsubstituted linear or branched chain alkyl, (mono-, di- or tri)hydroxyalkyl, (mono-, di- or tri)acyloxyalkyl, arylalkyl or aryl group; wherein each occurrence of R<sub>16</sub> is hydrogen, COOH, COOR<sup>ii</sup>, CONHR<sup>ii</sup>, a substituted or unsubstituted linear or branched chain alkyl or aryl group; wherein each occurrence of R<sup>iii</sup> is hydrogen, CHO, COOR<sup>iv</sup>, or a substituted or unsubstituted linear or branched chain alkyl, acyl, arylalkyl or aryl group; and wherein each occurrence of R<sup>ii</sup> and R<sup>iv</sup> are each independently H, or a substituted or unsubstituted linear or branched chain alkyl, arylalkyl or aryl group;

with the proviso that all occurrences of A on the multi-antigenic glycopeptide are not the same;

with the limitation that each occurrence of A independently comprises a carbohydrate domain, or elongated version thereof, that is present on tumor cells.

- 2. (Previously Presented) The construct of claim 1 wherein t' is  $\geq 2$  and within each bracketed structure s, independently, each occurrence of A is the same.
- 3. **(Original)** The construct of claim 1, wherein occurrences of A from one bracketed structure s to the next are different.
- 4. **(Original)** The construct of claim 1, wherein A, for each occurrence, is independently selected from the group consisting of Globo-H, fucosyl GM1, KH-1, glycophorin, N3, Tn, TF, STN, (2,3)ST, 2,6-STn, Gb3, Le<sup>y</sup> and Le<sup>x</sup>.
- 5. (Previously Presented) The construct of claim 1, wherein each occurrence of  $L^1$  is independently a moiety having the structure  $-O(CH_2)_n$  wherein n is an integer from 1-10; or a natural amino acid side chain, wherein a hydrogen radical of the natural amino acid side chain has been removed and replaced with a carbohydrate moiety A as defined in claim 1.

- 6. **(Original)** The construct of claim 5, wherein each occurrence of L<sup>1</sup> is independently a moiety having the structure  $-O(CH_2)_n$  wherein n is an integer from 1-10.
- 7. **(Original)** The construct of claim 6, wherein n is 3.
- 8. **(Previously Presented)** The construct of claim 1, having the structure:

wherein each occurrence of  $R_{\rm A}$  is independently H or methyl; and wherein each occurrence of  $R_{\rm B}$  is independently an alkyl glycoside moiety having the structure:

wherein n is an integer from 0-9;

wherein A, for each occurrence, is independently selected from the group consisting of Globo-H, fucosyl GM1, KH-1, glycophorin, N3, Tn, TF, STN, (2,3)ST, 2,6-STn, Gb3, Le<sup>y</sup> and Le<sup>x</sup>.

- 9. (Original) The construct of claim 1, wherein R<sup>X1</sup> is an acyl moiety.
- 10. (Original) The construct of claim 9, wherein R<sup>X1</sup> is an amino acid residue.
- 11. **(Original)** The construct of claim 1, wherein the spacer, for each occurrence, is independently a substituted or unsubstituted C<sub>1-6</sub>alkylidene or C<sub>2-6</sub>alkenylidene chain wherein up to two non-adjacent methylene units are independently optionally replaced by CO, CO<sub>2</sub>, COCO, CONR<sup>Z1</sup>, OCONR<sup>Z1</sup>, NR<sup>Z1</sup>NR<sup>Z2</sup>, NR<sup>Z1</sup>NR<sup>Z2</sup>CO, NR<sup>Z1</sup>CO, NR<sup>Z1</sup>CO<sub>2</sub>,

NR<sup>Z1</sup>CONR<sup>Z2</sup>, SO, SO<sub>2</sub>, NR<sup>Z1</sup>SO<sub>2</sub>, SO<sub>2</sub>NR<sup>Z1</sup>, NR<sup>Z1</sup>SO<sub>2</sub>NR<sup>Z2</sup>, O, S, or NR<sup>Z1</sup>; wherein each occurrence of R<sup>Z1</sup> and R<sup>Z2</sup> is independently hydrogen, alkyl, heteroalkyl, aryl, heteroaryl or acyl; a peptidyl moiety or a bivalent aryl or heteroaryl moiety.

12. **(Currently Amended)** The construct of claim 1, wherein the spacer, for each occurrence, is independently  $-(CHR^{sp})_n$ -, where n is 1-8 and each occurrence of  $R^{sp}$  is independently hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, -alkyl(aryl), -alkyl(heteroaryl),  $-OR^{sp1}$ ,  $-SR^{sp2}$  or  $-NR^{sp1}R^{sp2}$  where  $R^{sp1}$  and  $R^{sp4}$   $R^{sp2}$  are independently hydrogen or lower alkyl; a peptidyl moiety comprising one or more  $\alpha$ -amino acid residues, or a bivalent aryl moiety having the structure:

- 13. **(Original)** The construct of claim 1, wherein each occurrence of the spacer is independently a dipeptidyl moiety.
- 14. **(Currently Amended)** The construct of claim 1, wherein t' is 3, each occurrence of the spacer that is not directly attached to the linker is independently a dipeptidyl moiety and the glycopeptide has the structure:

$$\mathsf{R}^{\mathsf{X2}\mathsf{HN}} = \mathsf{R}^{\mathsf{X2}\mathsf{HN}} = \mathsf{R}^{\mathsf{X3}\mathsf{H}} = \mathsf{R}^{\mathsf{X5}\mathsf{P}} = \mathsf{R}^{\mathsf{S5}\mathsf{P}} = \mathsf{R}^{\mathsf{P}} = \mathsf{R}^{\mathsf{P$$

wherein  $L^1$  is as\_defined in claim 1; wherein  $R^{sp}$  is independently hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, -alkyl(aryl), -alkyl(heteroaryl), -OR<sup>sp1</sup>, -SR<sup>sp1</sup>  $\frac{-SR^{sp1}}{}$  or -NR<sup>sp1</sup>R<sup>sp2</sup> where  $R^{sp1}$  and  $R^{sp1}$   $\frac{R^{sp2}}{}$  are independently hydrogen or lower alkyl; a peptidyl moiety comprising one or more  $\alpha$ -amino acid residues, or a bivalent aryl moiety having the structure:

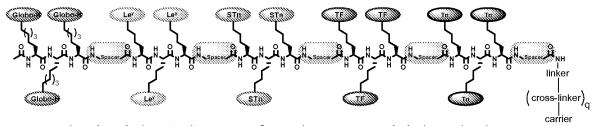
s1, s2 and s3 are independently integers from 2-5;  $A_1$ - $A_3$  are carbohydrate domains, as defined for A in claim 1, and are different from each other; and  $R^{X2}$  is hydrogen, alkyl, acyl, aryl, heteroaryl, -alkyl(aryl), -alkyl(heteroaryl) or a nitrogen protecting group.

15. **(Original)** The construct of claim 14 having the structure:

$$\mathsf{R}^{\mathsf{X2}}\mathsf{HN} = \mathsf{R}^{\mathsf{A3}} \mathsf{N} \mathsf{N} = \mathsf{R}^{\mathsf{A3}} \mathsf{N} = \mathsf{R}^{\mathsf{A$$

wherein R,  $R^{X2}$ ,  $R^{sp}$ , s1, s2 and s3 and  $A_1$ - $A_3$  are as defined in claim 14; each occurrence of n is independently an integer from 1-10; and each occurrence of  $R^{aa}$  is hydrogen, lower alkyl, aryl, heteroaryl, -alkyl(aryl) or -alkyl(heteroaryl).

- 16. (Original) The construct of claim 15, wherein each occurrence of n is 1 and each occurrence of  $R^{aa}$  is hydrogen or methyl.
- 17. **(Original)** The construct of claim 15, wherein each occurrence of n is independently an integer from 1-10 and each occurrence of R<sup>aa</sup> is hydrogen.
- 18. **(Original)** The construct of claim 15, wherein each occurrence of R<sup>sp</sup> is independently a natural amino acid side chain.
- 19. **(Original)** The construct of claim 18, wherein each occurrence of R<sup>sp</sup> is hydrogen.
- 20. **(Original)** The construct of claim 1 having the structure:



wherein q is 0 or 1; the spacer, for each occurrence, is independently a substituted or unsubstituted  $C_{1-6}$ alkylidene or  $C_{2-6}$ alkenylidene chain wherein up to two non-adjacent methylene units are independently optionally replaced by CO, CO<sub>2</sub>, COCO, CONR<sup>Z1</sup>, OCONR<sup>Z1</sup>, NR<sup>Z1</sup>NR<sup>Z2</sup>, NR<sup>Z1</sup>NR<sup>Z2</sup>CO, NR<sup>Z1</sup>CO, NR<sup>Z1</sup>CO<sub>2</sub>, NR<sup>Z1</sup>CO<sub>2</sub>, NR<sup>Z1</sup>CONR<sup>Z2</sup>, SO, SO<sub>2</sub>, NR<sup>Z1</sup>SO<sub>2</sub>, SO<sub>2</sub>NR<sup>Z1</sup>, NR<sup>Z1</sup>SO<sub>2</sub>NR<sup>Z2</sup>, O, S, or NR<sup>Z1</sup>; wherein each occurrence of R<sup>Z1</sup> and R<sup>Z2</sup> is independently hydrogen, alkyl, heteroalkyl, aryl, heteroaryl or acyl; a peptidyl moiety or a bivalent aryl or heteroaryl moiety; the linker is either a free carboxylic acid, -O-, (carboxamido)alkyl carboxamide, MBS, primary carboxamide, mono- or dialkyl carboxamide, linear or branched chain (carboxy)alkyl carboxamide, linear or branched chain (alkoxycarbonyl)alkyl-carboxamide, linear or branched chain (alkoxycarbonyl)alkyl-carboxamide, linear or branched chain (alkoxycarbonyl)alkylcarboxamide, an oligoester fragment comprising from 2 to about 20 hydroxy acyl residues, a peptidic fragment comprising from 2 to about 20 amino acyl residues, or a linear or branched chain alkyl or aryl carboxylic ester; and the carrier is an immunogenic carrier.

21. **(Original)** The construct of claim 1, 14, 15 or 20, wherein the linker is -O-, -NR<sub>G</sub>-, -NR<sub>G</sub>(aliphatic)NR<sub>J</sub>-, -NR<sub>G</sub>(heteroaliphatic)NR<sub>J</sub>-, -(aliphatic)NR<sub>J</sub>-, -(heteroaliphatic)NR<sub>J</sub>-, -O(heteroaliphatic)NR<sub>J</sub>-, -O(heteroaliphatic)NR<sub>J</sub>-, -NR<sub>G</sub>(aliphatic)NR<sub>J</sub>(C=O)(CR<sub>H</sub>R<sub>I</sub>)<sub>k</sub>S-, -NR<sub>G</sub>(heteroaliphatic)NR<sub>J</sub>(C=O)(CR<sub>H</sub>R<sub>I</sub>)<sub>k</sub>S-, -(aliphatic)NR<sub>J</sub>(C=O)(CR<sub>H</sub>R<sub>I</sub>)<sub>k</sub>S-, -(heteroaliphatic)NR<sub>J</sub>(C=O)(CR<sub>H</sub>R<sub>I</sub>)<sub>k</sub>S-, an oligoester fragment comprising from 2 to about 20 hydroxy acyl residues, a peptidic fragment comprising from 2 to about 20 amino acyl residues, or a linear or branched chain alkyl or aryl carboxylic ester, wherein each occurrence of k is independently 1-5; wherein each occurrence of R<sub>G</sub>, R<sub>H</sub>, R<sub>I</sub> or R<sub>J</sub> is independently hydrogen, a linear or branched, substituted or unsubstituted, cyclic or acyclic moiety, or a substituted or

unsubstituted aryl moiety, and wherein each aliphatic or heteroaliphatic moiety is independently substituted or unsubstituted, linear or branched, cyclic or acyclic.

- 22. **(Original)** The construct of claim 21, wherein the linker is -O-,  $-NR_G(CR_HR_I)_kNR_J$ -,  $-NR_G(CR_HR_I)_kNR_J$ -,  $-NR_G(CR_HR_I)_kNR_J$ -,  $-NR_G$ -,  $-(CR_HR_J)_kNR_I$ -,  $-O(CR_HR_I)_kNR_J$ , an oligoester fragment comprising from 2 to about 20 hydroxy acyl residues, a peptidic fragment comprising from 2 to about 20 amino acyl residues, or a linear or branched chain alkyl or aryl carboxylic ester, wherein each occurrence of k is independently 1-5, wherein each occurrence of  $R_G$ ,  $R_H$ ,  $R_I$  or  $R_J$  is independently hydrogen, a linear or branched, substituted or unsubstituted, cyclic or acyclic moiety, or a substituted or unsubstituted aryl moiety.
- 23. **(Original)** The construct of claim 1, 14, 15 or 20, wherein q is 1 and the crosslinker is a fragment having the structure:

whereby said structure is generated upon conjugation of maleimidobenzoic acid N-hydroxy succinimide ester with a linker.

- 24. (Original) The construct of claim 1, 14 or 15, wherein R is hydrogen and q is 0.
- 25. **(Original)** The construct of claim 1, 14 or 15, wherein R is an immunogenic carrier.
- 26. **(Original)** The construct of claim 25 wherein the immunogenic carrier is a protein, peptide or lipid.

- 27. **(Original)** The construct of claim 26 wherein the carrier is KLH, polylysine, HSA or BSA.
- 28. **(Original)** The construct of claim 1, 14 or 15, wherein q is 0 and R is a lipid immunogenic carrier having the structure:

wherein m', n' and p' are each independently integers between about 8 and 20; and  $R_{\rm V}$  is hydrogen, substituted or unsubstituted linear or branched chain lower alkyl or substituted or unsubstituted phenyl.

29. **(Original)** The construct of claim 20, wherein q is 0 and the carrier is a lipid immunogenic carrier having the structure:

wherein m', n' and p' are each independently integers between about 8 and 20; and R<sub>V</sub> is hydrogen, substituted or unsubstituted linear or branched chain lower alkyl or substituted or unsubstituted phenyl.

30. **(Original)** The construct of claim 28 wherein m', n' and p' are each 14 and the lipid is tripalmitoyl-S-glycerylcysteinylserine.

- 31. **(Original)** The construct of claim 1, 14 or 15, wherein each occurrence of A is independently Globo-H, fucosyl GM1, KH-1, glycophorin, Le<sup>y</sup>, Le<sup>x</sup>, N3, Tn, STN, 2,6-STn, (2,3)ST, Gb3 or TF.
- 32. **(Previously Presented)** The construct of claim 1, 14, 15 or 20, wherein the linker is a moiety having the structure  $-NH(CH_2)_{t''}NHC(=O)(CH_2)_{v}S$ -; wherein t'' and v are each independently integers from 1-6.
- 33. **(Previously Presented)** The construct of claim 1, 14 or 15, wherein n and q are each 0, R is hydrogen and the linker is a moiety having the structure -NH(CH<sub>2</sub>)<sub>t</sub>-NHC(=O)(CH<sub>2</sub>)<sub>v</sub>S- wherein t" and v are each independently integers from 1-6.
- 34. **(Previously Presented)** The construct of claim 1, 14 or 15, wherein n is 0, q is 1, R is KLH, the linker is a moiety having the structure –NH(CH<sub>2</sub>)<sub>t</sub>"NHC(=O)(CH<sub>2</sub>)<sub>v</sub>S-wherein t" and v are each independently integers from 1-6, and the crosslinker is a moiety having the structure:

- 35. (Previously Presented) The construct of claim 32 wherein t" is 3 and v is 1.
- 36. **(Previously Presented)** A method for the synthesis of clustered multi-antigenic constructs having the structure:

wherein q is 0 or 1;

each occurrence of s is independently an integer from 2-20;

t' is an integer from 2-6;

R<sup>X1</sup> is hydrogen, alkyl, acyl, aryl, heteroaryl, -alkyl(aryl), -alkyl(heteroaryl), a nitrogen protecting group, an amino acid or a protected amino acid;

R is hydrogen or an immunogenic carrier;

each occurrence of the spacer is independently a substituted or unsubstituted aliphatic, heteroaliphatic, aryl, heteroaryl or peptidic moiety;

the linker is either a free carboxylic acid, –O-, (carboxamido)alkyl carboxamide, MBS, primary carboxamide, mono- or dialkyl carboxamide, mono- or diarylcarboxamide, linear or branched chain (carboxy)alkyl carboxamide, linear or branched chain (alkoxycarbonyl)alkyl-carboxamide, linear or branched chain (carboxy)arylalkylcarboxamide, linear or branched chain (alkoxycarbonyl)alkylcarboxamide, an oligoester fragment comprising from 2 to about 20 hydroxy acyl residues, a peptidic fragment comprising from 2 to about 20 amino acyl residues, or a linear or branched chain alkyl or aryl carboxylic ester;

each occurrence of L<sup>1</sup> is independently a substituted or unsubstituted aliphatic or heteroaliphatic moiety;

each occurrence of A is independently a carbohydrate domain having the structure:

wherein a, b, c, d, e, f, g, h, i, x, y and z are independently 0, 1, 2 or 3, with the proviso that the x, y and z bracketed structures represent pyranose moieties and the sum of b and c is 2, the sum of d and f is 2, and the sum of g and i is 2, and with the proviso that x, y and z are not simultaneously 0; wherein R<sub>0</sub> is hydrogen, a linear or branched chain alkyl, acyl, arylalkyl or aryl group; wherein each occurrence of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub> and R<sub>9</sub> is independently hydrogen, OH, OR<sup>i</sup>, NHR<sup>i</sup>, NHCOR<sup>i</sup>, F, CH<sub>2</sub>OH, CH<sub>2</sub>OR<sup>i</sup>, a substituted or unsubstituted linear or branched chain alkyl, (mono-, di- or tri)hydroxyalkyl, (mono-, di- or tri)acyloxyalkyl, arylalkyl or aryl group; wherein each occurrence of R<sup>i</sup> is independently hydrogen, CHO, COOR<sup>ii</sup>, or a substituted or unsubstituted linear or branched chain alkyl, acyl, arylalkyl or aryl group or a saccharide moiety having the structure:

wherein Y and Z are independently NH or O; wherein k, l, r, s, t, u, v and w are each independently 0, 1 or 2; with the proviso that the v and w bracketed structures represent pyranose moieties and the sum of l and k is 1 or 2, and the sum of s and u is 2, and with the proviso that v and w are not simultaneously 0; wherein  $R'_0$  is hydrogen, a linear or branched chain alkyl, acyl, arylalkyl or aryl group; wherein each occurrence of  $R_{10}$ ,  $R_{11}$ ,  $R_{12}$ ,  $R_{13}$ ,  $R_{14}$  and  $R_{15}$  is independently hydrogen, OH,  $OR^{iii}$ ,  $NHR^{iii}$ ,  $NHCOR^{iii}$ , F,  $CH_2OH$ ,  $CH_2OR^{iii}$ , or a substituted or unsubstituted linear or branched chain alkyl, (mono-, di- or tri)hydroxyalkyl, (mono-, di- or tri)acyloxyalkyl, arylalkyl or aryl group; wherein each occurrence of  $R_{16}$  is hydrogen, COOH,  $COOR^{ii}$ ,  $CONHR^{ii}$ , a substituted or unsubstituted linear or branched chain alkyl or aryl group; wherein each occurrence of  $R^{iii}$  is hydrogen, CHO,  $COOR^{iv}$ , or a substituted or unsubstituted linear or branched chain alkyl, acyl, arylalkyl or aryl group; and wherein each occurrence of  $R^{ii}$  and  $R^{iv}$  are each independently H, or a substituted or unsubstituted linear or branched chain alkyl, arylalkyl or aryl group; and wherein each glycosidic moiety is either  $\alpha$ - or  $\beta$ -linked to an amino acid;

with the limitation that each occurrence of A independently comprises a carbohydrate domain, or elongated version thereof, that is present on tumor cells;

wherein within each bracketed structure s, independently, each occurrence of A is the same

wherein said method comprises steps of:

(a) providing a glycoamino acid having the structure:

wherein A is a carbohydrate domain as described above;

(b) reacting s occurrences of said glycoamino acid under suitable conditions to generate a glycopeptide having the structure:

$$\begin{array}{c|c}
A \\
\downarrow \\
R \\
\downarrow \\
N \\
H
\end{array}$$

$$\begin{array}{c}
A \\
\downarrow \\
O \\
S
\end{array}$$

$$\begin{array}{c}
OR \\
O \\
S
\end{array}$$

wherein s is an integer from 2-20; each occurrence of A is the same within the bracketed glycopeptide s; R' is hydrogen or a protecting group; and R'' is hydrogen, a protecting group, an amino acid or a protected amino acid;

(c) reacting said glycopeptide with a spacer under suitable conditions to generate a spacer construct having the structure:

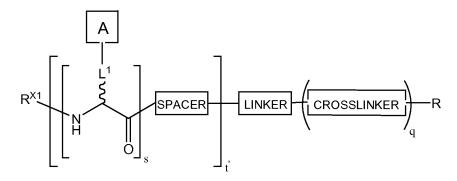
(d) Repeating steps (a) through (c) t'-1 times to generate t'-1 spacer constructs each independently having the structure:

wherein, for each spacer construct, s, L<sup>1</sup>, R'' and the spacer moiety may be the same or different; and each spacer construct comprises a different carbohydrate domain A;

(e) Reacting the spacer construct formed in step (c) with the spacer constructs of step (d) under suitable conditions to generate a construct having the structure:

wherein R<sup>x</sup> is a protecting group; each occurrence of A is the same within each bracketed structure s; and each bracketed structure s comprises a different carbohydrate domain A; and

(f) Reacting the constructs of step (e) with a linker and optionally a crosslinker and/or an immunogenic carrier under suitable conditions to form the clustered multi-antigenic construct having the structure:



wherein q, linker, crosslinker and R are as defined above.

- 37. **(Original)** A pharmaceutical composition comprising:
  - a construct of claim 1, and
  - a pharmaceutically suitable carrier.
- 38. **(Original)** The pharmaceutical composition of claim 37, wherein the construct is conjugated to an immunogenic carrier.
- 39. (Original) A pharmaceutical composition comprising:
  - a pharmaceutically acceptable carrier;
  - an immunogenic carrier; and
  - a multi-antigenic clustered construct of claim 1;
  - whereby the construct has not been conjugated to the immunogenic carrier.
- 40. **(Original)** The pharmaceutical composition of claim 37 or 39, wherein the immunogenic carrier is bovine serum albumin, polylysine or keyhole limpet hemocyanin.
- 41. **(Original)** The pharmaceutical composition of claim 37 or 39, wherein the construct does not comprise a crosslinker and the immunogenic carrier is a lipid having the structure:

$$\begin{array}{c|c} R_V & OH & O\\ \hline \\ N & E\\ \hline \\ O & HN & O\\ \hline \\ O & M' & O\\ \hline \\ O & O\\ \hline \\ O & O\\ \hline \\ p' & O\\ \hline \end{array}$$

wherein m', n' and p' are each independently integers between about 8 and 20; and  $R_{\rm V}$  is hydrogen, substituted or unsubstituted linear or branched chain lower alkyl or substituted or unsubstituted phenyl.

- 42. **(Original)** The pharmaceutical composition of claim 41, wherein m', n' and p' are each 14 and the lipid is tripalmitoyl-S-glycerylcysteinylserine.
- 43. **(Original)** The pharmaceutical composition of claim 37 or 39, further comprising one or more immunological adjuvants.
- 44. **(Original)** The pharmaceutical composition of claim 43, wherein at least one of said one or more immunological adjuvants is a saponin adjuvant.
- 45. **(Original)** The pharmaceutical composition of claim 44, wherein the saponin adjuvant is GPI-0100.
- 46. **(Original)** The pharmaceutical composition of claim 43, wherein at least one of said one or more immunological adjuvants is bacteria or liposomes.
- 47. **(Original)** The pharmaceutical composition of claim 46, wherein the immunological adjuvant is Salmonella minnesota cells, bacille Calmette-Guerin or QS21.
- 48. **(Withdrawn)** A method of treating cancer in a subject suffering therefrom comprising:

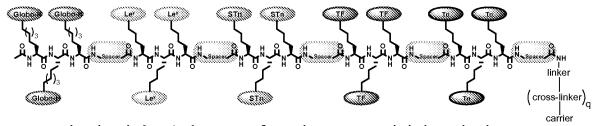
administering to a subject a therapeutically effective amount of a clustered multiantigenic construct of claim 1,

and a pharmaceutically suitable carrier.

- 49. **(Withdrawn)** The method of claim 48, wherein the construct is conjugated to an immunogenic carrier.
- 50. **(Withdrawn)** The method of claim 48, wherein the construct has not been conjugated to a carrier, and the method further comprises administering an immunogenic carrier.
- 51. **(Withdrawn)** The method of claim 48, wherein said method comprises preventing the recurrence of cancer in a subject.
- 52. (Withdrawn) The method of claim 48 or 51, wherein the cancer is a solid tumor.
- 53. **(Withdrawn)** The method of claim 48 or 51, wherein the subject is in clinical remission, or where the subject has been treated by surgery, has limited unresected disease.
- 54. **(Withdrawn)** A method of inducing antibodies in a subject, wherein the antibodies are capable of specifically binding with tumor cells, which comprises administering to the subject an amount of a clustered multi-antigenic construct of claim 1 effective to induce the antibodies.
- 55. **(Withdrawn)** The method of claim 54, wherein the glycopeptide is conjugated to an immunogenic carrier.
- 56. **(Withdrawn)** A method of inducing antibodies in a subject, wherein the antibodies are capable

of specifically binding with tumor cells, which comprises administering to the subject: an amount of a clustered multi-antigenic construct of claim 1; wherein R is hydrogen; and wherein the amount of construct is effective to induce the antibodies.

- 57. **(Withdrawn)** The method of claim 56, wherein the method further comprises administering an immunogenic carrier.
- 58. **(Withdrawn)** The method of claim 48, 54 or 56, wherein the clustered multiantigenic construct has the stucture:



wherein q is 0 or 1; the spacer, for each occurrence, is independently a substituted or unsubstituted  $C_{1-6}$ alkylidene or  $C_{2-6}$ alkenylidene chain wherein up to two non-adjacent methylene units are independently optionally replaced by CO, CO<sub>2</sub>, COCO, CONR<sup>Z1</sup>, OCONR<sup>Z1</sup>, NR<sup>Z1</sup>NR<sup>Z2</sup>, NR<sup>Z1</sup>NR<sup>Z2</sup>CO, NR<sup>Z1</sup>CO, NR<sup>Z1</sup>CO<sub>2</sub>, NR<sup>Z1</sup>CONR<sup>Z2</sup>, SO, SO<sub>2</sub>, NR<sup>Z1</sup>SO<sub>2</sub>, SO<sub>2</sub>NR<sup>Z1</sup>, NR<sup>Z1</sup>SO<sub>2</sub>NR<sup>Z2</sup>, O, S, or NR<sup>Z1</sup>; wherein each occurrence of R<sup>Z1</sup> and R<sup>Z2</sup> is independently hydrogen, alkyl, heteroalkyl, aryl, heteroaryl or acyl; a peptidyl moiety or a bivalent aryl or heteroaryl moiety; the linker is either a free carboxylic acid, -O-, (carboxamido)alkyl carboxamide, MBS, primary carboxamide, mono- or dialkyl carboxamide, linear or branched chain (carboxy)alkyl carboxamide, linear or branched chain (alkoxycarbonyl)alkyl-carboxamide, linear or branched chain (alkoxycarbonyl)alkylcarboxamide, linear or branched chain (alkoxycarbonyl)alkylcarboxamide, an oligoester fragment comprising from 2 to about 20 hydroxy acyl residues, a peptidic fragment comprising from 2 to about 20 amino acyl residues, or a linear or branched chain alkyl or aryl carboxylic ester; and the carrier is an immunogenic carrier.